

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

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| CHRIMAR SYSTEMS, INC., et al, | § | |
| | § | |
| v. | § | |
| | § | Civil Action No. 6:15-cv-618-JRG-JDL |
| ADTRAN, INC., et al. (LEAD CASE) | § | |
| | § | |
| | § | |

MEMORANDUM OPINION AND ORDER

This claim construction opinion construes the disputed claim terms in U.S. Patent Nos. 8,115,012 (“the ’012 Patent”), 8,902,760 (“the ’760 Patent”), 8,942,107 (“the ’107 Patent”), and 9,019,838 (“the ’838 Patent”) (“patents-in-suit”). Plaintiffs Chrimar Systems, Inc. d/b/a CMS Technologies and Chrimar Holding Company LLC (“Chrimar”) allege that Defendants¹ infringe the ’012, ’760, ’107, and ’838 Patents. Plaintiffs filed an opening claim construction brief (Doc. No. 403), to which Defendants filed a responsive brief (Doc. No. 432), and Plaintiffs filed a reply (Doc. No. 440). The parties additionally submitted a Joint Claim Construction Chart pursuant to P.R. 4-5(d). (Doc. No. 442.) On June 9, 2016, the Court held a claim construction hearing. Upon consideration of the parties’ arguments, and for the reasons stated herein, the Court adopts the constructions set forth below.

OVERVIEW OF THE PATENTS

Plaintiffs allege Defendants infringe certain asserted claims of the patents-in-suit. Plaintiffs contend that “[t]he four patents-in-suit share, in substance, a common specification and disclose inventions related to managing devices that connect to a wired network.” (Doc. No. 403

¹Defendants include ADTRAN, Inc., Accton Technology Corporation, Advantech Corporation, Aerohive Networks, Inc., Allworx Corporation, Belden, Inc., Costar Technologies, Inc., Costar Video Systems, LLC, D-Link Systems, Incorporated, Dell Inc., Edgecore USA Corporation, EnGenius Technologies, Inc., Garrettcom, Inc., Hirschmann, Inc., Huawei Enterprise USA Inc., Huawei Technologies USA, Inc., TP-Link USA Corporation, TRENDnet International Inc., WatchGuard Technologies, Inc.

at 1.) Specifically, the '107 Patent is a continuation of the '012 Patent, and the '760 Patent and the '838 Patent are continuations of the '107 Patent.

For reference, background on the '012 Patent is provided. The '012 Patent is titled “System and Method for Adapting a Piece of Terminal Equipment,” and relates to tracking of devices that are connected to a wired network. *See generally* '012 Patent. More specifically, the '012 Patent describes permanently identifying an “asset,” such as a computer, “by attaching an external or internal device to the asset and communicating with that device using existing network wiring or cabling.” '012 Patent at 1:67–2:2. The '012 Patent refers to that device as the “remote module.” *Id.* at 3:22–26. The asset can then be managed, tracked, or identified by using the remote module to communicate a unique identification number, port ID, or wall jack location to the network monitoring equipment, or “central module.” *Id.* at 6:7–13, 8:66–9:4. The '012 Patent further discloses that “asset identification” may be done in a way “that does not use existing network bandwidth.” *Id.* at 3:10–12. These concepts are reflected in the patents’ asserted claims, and independent claim 31 is set forth below for reference:

31. An adapted piece of Ethernet data terminal equipment comprising:
 - an Ethernet connector comprising a plurality of contacts;
 - and
 - at least one path coupled across selected contacts, the selected contacts comprising at least one of the plurality of contacts of the Ethernet connector and at least another one of the plurality of contacts of the Ethernet connector,wherein distinguishing information about the piece of Ethernet data terminal equipment is associated to impedance within the at least one path.

'012 Patent at 18:62–19:5 (Claim 31).

There are ten disputed terms or phrases in the asserted claims. This Court previously construed disputed terms in the '012 Patent in *Chrimar Systems, Inc., et al. v. Alcatel-Lucent, Inc., et al.*, No. 6:13-cv-880, (Doc. Nos. 92 (E.D. Tex. Oct. 22, 2014), 99 (Jan. 7, 2015) & 102

(Jan. 16, 2015)), together with the related case of *Chrimar Systems, Inc., et al. v. AMX, LLC*, No. 6:13-cv-881 (collectively, “*Chrimar I*”). The Court also previously construed certain claim terms of the ’012, ’107, ’760, and ’838 Patents in related cases *Chrimar Systems, Inc., et al. v. Alcatel-Lucent, Inc., et al.*, No. 6:15-cv-163, (Doc. No. 123 (Mar. 28, 2016)), and *Chrimar Systems, Inc., et al. v. AMX, LLC*, No. 6:15-cv-164 (collectively “*Chrimar II*”). Further, the Court ruled on a motion for summary judgment of indefiniteness. (6:15-cv-163 (Doc. No. 122 (Mar. 28, 2016).) The parties presently dispute many of the same terms already construed by this Court in *Chrimar I* and *Chrimar II*.

LEGAL STANDARD

I. Principles of Claim Construction

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent’s intrinsic evidence to define the patented invention’s scope. *Id.* at 1313-1314; *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification and the prosecution history. *Phillips*, 415 F.3d at 1312-13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312-13; *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003). Claim language guides the Court’s construction of claim terms. *Phillips*, 415 F.3d at 1314. “[T]he context in which a term is used in the asserted claim can be highly instructive.” *Id.* Other claims, asserted and unasserted, can provide additional instruction because “terms are normally used consistently throughout the patent.” *Id.*

Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficoso N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning than it would otherwise possess, or disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343-44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex, Inc.*, 299 F.3d at 1325. For example, “[a] claim interpretation that excludes a preferred embodiment from the scope of the claim ‘is rarely, if ever, correct.’” *Globetrotter Software, Inc. v. Elam Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics Corp.*, 90 F.3d at 1583). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be

read into the claims.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); *see also Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during prosecution of the patent. *Home Diagnostics Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”). The well-established doctrine of prosecution disclaimer “preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution.” *Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). The prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during prosecution to obtain claim allowance. *Middleton Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002); *see also Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 994 (Fed. Cir. 2003) (“The disclaimer . . . must be effected with ‘reasonable clarity and deliberateness.’”) (citations omitted)). “Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover.” *Spectrum Int’l v. Sterilite Corp.*, 164 F.3d 1372, 1378-79 (Fed. Cir. 1988) (quotation omitted). “As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.” *Omega Eng’g, Inc.*, 334 F.3d at 1324.

Although “less significant than the intrinsic record in determining the legally operative meaning of claim language,” the Court may rely on extrinsic evidence to “shed useful light on the relevant art.” *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help the Court understand the underlying technology and the manner in which one

skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful.” *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

In patent construction, “subsidiary fact finding is sometimes necessary” and the court “may have to make ‘credibility judgments’ about witnesses.” *Teva v. Sandoz*, 135 S.Ct. 831, 838 (2015). In some cases, “the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Id.* at 841. “If a district court resolves a dispute between experts and makes a factual finding that, in general, a certain term of art had a particular meaning to a person of ordinary skill in the art at the time of the invention, the district court must then conduct a legal analysis: whether a skilled artisan would ascribe that same meaning to that term *in the context of the specific patent claim under review*.” *Id.* (emphasis in original). When the court makes subsidiary factual findings about the extrinsic evidence in consideration of the “evidentiary underpinnings” of claim construction, those findings are reviewed for clear error on appeal. *Id.*

II. Indefiniteness

Indefiniteness is a question of law. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 723 F.3d 1363, 1368 (Fed. Cir. 2013). “[D]etermination of claim indefiniteness is a legal conclusion that is drawn from the court’s performance of its duty as the construer of patent claims.” *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1376 (Fed. Cir. 2001) *abrogated on*

other grounds by *Nautilus v. Biosig Instruments, Inc.*, 134 S.Ct. 2120, 2130 (2014). Indefiniteness is a challenge to the validity of the patent that must be established by clear and convincing evidence. *Nautilus*, 134 S.Ct. at 2130, n. 10 (citing *Microsoft Corp. v. i4i Ltd. Partnership*, 131 S.Ct. 2238, 2242 (2011) for the clear-and-convincing standard applicable to challenges to invalidity and declining to alter this standard). Indefiniteness is “evaluated from the perspective of someone skilled in the relevant art at the time the patent was filed.” *Nautilus*, 134 S.Ct. at 2128. Claims must “be read in light of the patent’s specification and prosecution history.” *Id.* at 2128.

Under 35 U.S.C. § 112 ¶ 2, “[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” “A lack of definiteness renders invalid ‘the patent or any claim in suit.’” *Nautilus*, 134 S.Ct. at 2125 (citing 35 U.S.C. § 282, ¶ 2(3)). “[A] patent is invalid for indefiniteness if its claims, read in light of the specification ..., and the prosecution history, fail to inform, with *reasonable certainty*, those skilled in the art about the scope of the invention.” *Id.* at 2124 (emphasis added). Reasonable certainty is something more precise than insolubly ambiguous, but short of absolute precision. *Id.* at 2129–30. “The definiteness standard ‘must allow for a modicum of uncertainty’ to provide incentives for innovation, but must also require ‘*clear notice* of what is claimed, thereby appris[ing] the public of what is still open to them.’” *Interval Licensing LLC v. AOL*, 766 F.3d 1364, 1370 (Fed. Cir. 2014) (emphasis added) (quoting *Nautilus*, 134 S.Ct. at 2128–29). “Although absolute precision or mathematical precision is not required, it is not enough as some of the language in ... prior cases may have suggested, to identify ‘some standard for measuring the scope of the phrase.’” *Id.* at 1370–71 (quoting *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005)). “The claims,

when read in light of the specification and the prosecution history, must provide *objective boundaries* for those of skill in the art.” *Id* at 1371 (emphasis added) (relying on *Nautilus*, 134 S.Ct. at 2130 & n. 8).

DISCUSSION

The parties dispute the meaning of the following claim terms, which are set forth herein:

I. “convey information” (’107 Patent, Claims 1, 104)

| Plaintiffs’ Proposal | Defendants’ Proposal |
|---|---|
| No construction necessary, as the term should be afforded its plain-and-ordinary meaning. | “encode information through modulation of DC current” |

Plaintiffs argue that “convey information” should have its plain and ordinary meaning and that Defendants’ proposed construction should be rejected because it “improperly reads an express limitation out of the claims [convey] and imports two limitations into them [encoding and modulation].” (Doc. No. 403, at 6.) Specifically, Plaintiffs argue that the claim requires that the at least one of the magnitudes of DC current flow must be configured to “convey” information, not “encode” it. *Id.* Plaintiffs emphasize that the claims do not say anything about encoding information, and that the specification explains that information may be encoded, but that encoding is not necessary. *Id.* at 6–7 (citing ’012 Patent at 5:61–67). Further, Plaintiffs cite to the doctrine of claim differentiation to argue that because dependent claim 38 recites “the information is encoded,” “convey information” in independent claim 1 cannot mean “encoding.” *Id.* at 7. Finally, Plaintiffs also argue that the term “modulation” is an improper addition to the claim language. *Id.* at 8.

Defendants argue that the specification “consistently and exclusively discloses encoding and modulating the information onto the current flow.” (Doc. No. 432, at 14–15.) In support, Defendants cite to the portion of the specification that describes the central module “can slightly alter the voltage supplied by isolation power supply 8 based upon status data provided by the status data encoder.” *Id.* at 14 (citing ’012 Patent at 5:53–61.) In addition, Defendants cite to three other embodiments that Defendants contend all entail encoding and modulating a DC current flow to convey information. *Id.* at 14–15 (citing ’012 Patent at 6:48–51; 9:24–30, 47–50; 10:31–32, 40–42.) Defendants further argue that “Defendants’ construction does not ‘read out’ the ‘convey’ limitation . . . because encoding and modulating a signal with information causes the signal to convey that information.” *Id.* at 15.

Here, the relevant portion of the claim language recites: “wherein at least one of the magnitudes of the DC current flow to convey information about the piece of Ethernet terminal equipment.” ’107 Patent at 17:22–25. As it pertains to “encoding,” the specification does refer to encoding information. *See* ’012 Patent at 5:53–61 (“slightly alter the voltage supplied by isolation power supply 8 based upon status data provided by the status data encoder 9”); 6:7–14 (“passes this encoded number to signal transmitter 12 which sends the encoded number across the data communication link 2A by altering the total current draw of the remote module 16”); *see also id.* at 6:48–51, 9:24–30, 9:47–50, 10:31–32 & 10:40–42; *id.* at Figs. 5, 7, 10 & 18.

However, the specification, in discussing the transmission of status information, does not limit transmission to encoding. Indeed, the specification states: “The scope of the invention includes transmitting status information as a *single bit* or as a pulse train. Types of transmitted status information include whether the protection circuit is active, date, time, and port location. It is *also* within the scope of the invention to encode the status data using methods such as single bit on/off, Manchester, 4B/5B, and Frequency Shift Keying (FSK).” ’012 Patent at 5:61–67 (emphasis added). This passage suggests that while encoding may be within the scope of the invention, it is not necessary, as implied by the disclosure that a single bit may be used rather than necessarily the disclosed encoding techniques. Moreover, dependent claims 38 and 39 of the ’107 Patent both recite “wherein the information is [] encoded.” ’107 Patent at 19:7–11. These dependent claims further suggest that the patentee did not intend to limit “convey information” to “encoding.” *See Phillips*, 415 F.3d at 1315 (“[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”); *Alcon Research, Ltd. v. Apotex Inc.*, 687 F.3d 1362, 1367 (Fed. Cir. 2012) (citing 35 U.S.C. § 112 ¶ 4) (“It is axiomatic that a dependent claim cannot be broader

than the claim from which it depends . . . A dependent claim narrows the claim from which it depends.”); *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1334 (Fed. Cir. 2010) (“A person of ordinary skill would presume that a structure recited in a dependent claim will perform a function required of that structure in an independent claim.”).

While the Court agrees the specification discusses encoding, the claim does not require it, the specification does not clearly limit to encoding, and the doctrine of claim differentiation supports a broader construction. As such, the Court cannot limit the term “convey information” to require encoding. Defendants’ proposal to include “encode” in their definition of “convey information” connotes a degree of transformation that is not required by the claims, and Defendants’ proposal relies upon use of magnitudes of DC current flow, which is recited by other claim language. Defendants’ proposal of “encode” would thus tend to confuse rather than clarify the scope of the claims. Therefore, the Court declines to construe the term “convey information” to include the requirement that the information be “encoded.”

As to modulation, Defendants contend that claims 1 and 104 of the ’107 Patent require different magnitudes of DC current, thereby requiring modulation. (Doc. No. 432, at 15–16.) Claim 1 of the ’107 Patent recites, in relevant part: “the piece of Ethernet terminal equipment to draw different magnitudes of DC current flow via the at least one path, . . . wherein *at least one of the magnitudes* of the DC current flow to convey information about the piece of Ethernet terminal equipment.” ’107 Patent at 20–25 (emphasis added). Here, the claim language plainly requires only “one of the magnitudes of the DC current flow” to “convey information.” This recital in the claims is also consistent with disclosure in the specification that, for example, information can be conveyed by “alter[ing] the flow of current from within the remote module 16a by changing the impedance of a circuit connected across the data communication link 2A.”

'012 Patent at 8:52–55. Although this passage appears in the context of “encoded signals” (*see id.* at 8:45–59), this disclosure suggests that information could be conveyed by a single impedance level (and, thus, a single associated flow of current).

Defendants’ proposal of “modulation” would require that information is conveyed by modulating between at least two levels. That is, requiring “modulation” would run the risk that the claim would be interpreted by a finder of fact as requiring use of *multiple* magnitudes of DC current flow in order to convey a single piece of information. The Court declines to add such a requirement to the meaning of “convey information” when the surrounding claim language is clear. Therefore, the Court declines to construe the term “convey information” to include “modulation” of the DC current.

Having resolved these disputes, the Court finds that “convey information” needs no further construction.

II. “connector” ('012 Patent, Claim 31; '107 Patent, Claims 1, 104; '838 Patent, Claim 1)

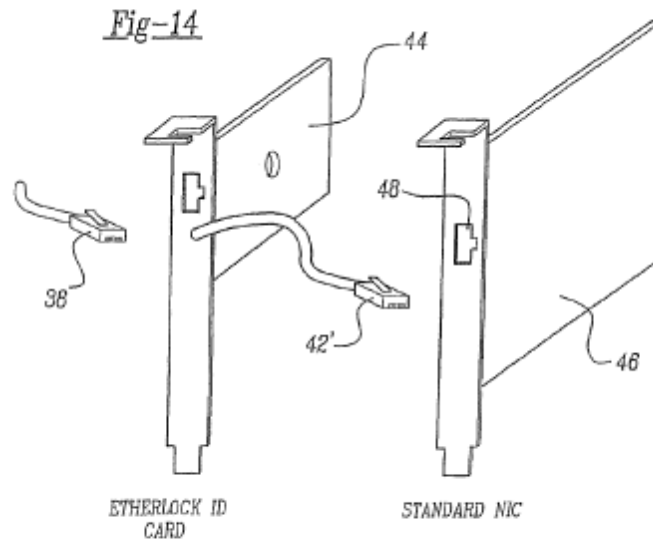
| Plaintiffs’ Proposal | Defendants’ Proposal |
|---|--|
| No construction necessary, as the term should be afforded its plain-and-ordinary meaning. | “a network cable plug configured to be received by a receptacle” |

Plaintiffs argue that a person of ordinary skill in the art would understand that both plugs and receptacles are “connectors.” (Doc. No. 403, at 9.) Plaintiffs point to claim 31 of the '012 Patent that broadly recites an “Ethernet connector” and does not specify plug or jack. *Id.* Further, Plaintiffs cite to the dependent claims in support which recite “the Ethernet connector is an RJ45 jack.” *Id.* Finally, Plaintiffs cite to the prosecution history where the patentee cited to the IEEE

802.3i Ethernet standard referring to and showing a “connector” as both a receptacle and a plug. *Id.* at 11–12.

Defendants argue that the term “connector” is used in the patents only to describe a plug. (Doc. No. 432, at 17.) Defendants cite to several disclosures in the ’012 Patent, including Figures 11, 14, and 15 that show and describe a “connector” as a plug. Defendants further contend that the prosecution history actually supports their construction because the patentee explained the plug depicted in the prior art was “synonymous to the normal network wire connector 38,” and the receptacle was “synonymous to the normal input receptacle 48.” (Doc. No. 432, at 18.)

Turning first to the claims, claim 31 of the ’012 Patent is representative and recites: “the selected contacts comprising at least one of the plurality of contacts of the Ethernet connector and at least another one of the plurality of contacts of the Ethernet connector.” ’012 Patent at 18:66–19:2. Dependent Claims 34, 39, 44, 45, and 47 of the ’012 Patent recite “the Ethernet connector is an RJ45 jack.” ’012 Patent (Claims 34, 39, 44, 45, & 47.) The specification does refer to a “connector” as a plug and a jack as a “receptacle.” In Figure 14 of the ’012 Patent, for example, numeral 38 identifies a plug whereas numeral 48 identifies a jack:



(’012 Patent, Fig. 14; 10:67 (“connector 38”), 11:2 (same) & 11:14 (“network wire connector 38”); *see also id.* at 11:16 (“normal input receptacle 48”).) During prosecution of the ’012 Patent, the patentee referred to an illustration of a jack as a “connector.” (Doc. No. 403, Ex. G, Dec. 6, 2011 Amendment at 26–28.) The patentee also referred to “connector 38” and “receptacle 48.” *Id.* at 27–28.

Here, independent claim 31 broadly recites an “Ethernet connector” and does not specify a plug or jack. ’012 Patent at 18:66–19:2. Thus, the claims do not require that the “Ethernet connector” be *only* a plug. Defendants’ primary arguments in support of their contention that a “connector” refers only to a plug are based upon the specification and the prosecution history. However, while the specification does show embodiments where the connector is a plug and the patentee referred to a plug as a “connector,” during prosecution the patentee also referenced the IEEE standard which illustrates a jack as a “connector”:

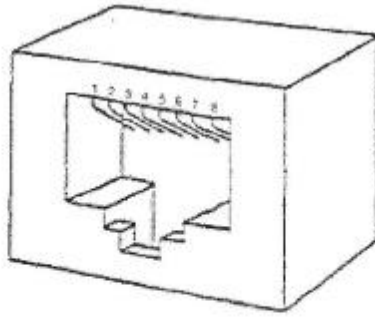


Fig 14-20
MAU MDI Connector

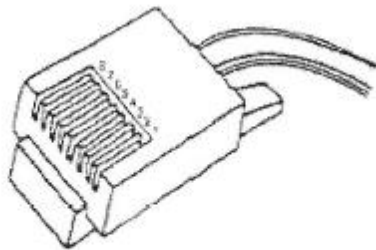


Fig 14-21
Twisted-Pair Link Segment Connector

(Doc. No. 403, Ex. G, Dec. 6, 2011 Amendment at 27.)

In this regard, the prosecution history does not amount to a clear disavowal by the patentee, and a “receptacle” may simply be a type of connector, just as a plug may be a type of connector. *See Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1332 (Fed. Cir. 2004) (“Because the statements in the prosecution history are subject to multiple reasonable interpretations, they do not constitute a clear and unmistakable departure from the ordinary meaning of the term . . .”). Moreover, because the dependent claims recite “the Ethernet connector is an RJ45 jack,” construing the independent claim to exclude a jack would be disfavored. *See Tr. of Columbia Univ. in City of N.Y. v. Symantec Corp.*, 811 F.3d 1359, 1370 (Fed. Cir. 2016) (“[C]onstruing the independent claim to exclude material covered by the

dependent claim would be inconsistent.”). Therefore, the Court declines to limit the term “connector” to only a plug.

Having resolved the parties’ dispute, the Court finds that the term “connector” needs no further construction.

III. “Ethernet terminal equipment” and “end device” (’012 Patent, Claims 31, 36; ’107 Patent, Claims 1, 5, 43, 72, 83, 103, 104, 111, 123, 125; ’760 Patent, Claims 1, 31, 69, 72, 73, 106, 142, 145)

| Plaintiffs’ Proposal | Defendants’ Proposal |
|---|--|
| “Ethernet terminal equipment”: “device at which data transmission can originate or terminate and that is capable of Ethernet communication” “end device”: This term needs no further construction and should be afforded its plain-and-ordinary meaning. | “device at which data transmission can originate or terminate and that is capable of Ethernet communications, as opposed to intermediate network elements” |

At the June 9, 2016 claim construction hearing, the parties reached agreement that “Ethernet terminal equipment” should be construed to mean “device at which Ethernet data transmission can originate or terminate.” The Court, having reviewed the patents-in-suit, agrees with the parties’ proposed construction and therefore construes the term “Ethernet terminal equipment” to mean “device at which Ethernet data transmission can originate or terminate.”

As to “end device,” Plaintiff addressed concerns regarding construing “end device” as a “device at which Ethernet data transmission can originate or terminate” because of the implications it may have on other cases or claims. However, as it applies to the present case, the

Court sees no conflict or dispute to resolve at this time. Therefore, the Court construes the term “end device” to mean a “device at which Ethernet data transmission can originate or terminate” for purposes of this action.

IV. “To ...” (’107 Patent, Claims 1, 43, 104, 111; ’760 Patent, Claims 1, 69, 73, 142; ’838 Patent, Claims 1, 7, 26, 40, 69)

| Plaintiffs’ Proposal | Defendants’ Proposal |
|---|---|
| Plain and ordinary meaning; not subject to 35 U.S.C. § 112(6) | <p>Terms are statements of intended use not entitled to patentable weight. In the alternative, terms are means-plus-function limitations subject to 35 U.S.C. § 112(6).</p> <p>Corresponding Structure (’107 Patent): “isolation power supply 13, signal transmitter 12, Manchester encoder 11, and firmware kernel 10”</p> <p>Corresponding Structure (’838 Patent): “isolation power supply 8, Manchester decoder 5, firmware kernel 4, signal modulator 7, and signal receiver 6”</p> <p>Corresponding Structure (’760 Patent):</p> <p style="padding-left: 40px;">For “draw” function: “isolation power supply 8, Manchester decoder 5, firmware kernel 4, signal modulator 7, and signal receiver 6”</p> <p style="padding-left: 40px;">For “detect” and “control” functions: “isolation power supply 13, signal transmitter 12, Manchester encoder 11, and firmware kernel 10”</p> <p style="padding-left: 40px;">For “distinguishing” function: “signal receiver 6, Manchester decoder 5, and firmware kernel 4”</p> |

In the briefing, Plaintiffs argued that the “to” phrases should have their plain and ordinary meaning. (Doc. No. 432, at 4.) Defendants argue that “the purported ‘inventive configuration’ is simply missing from the actual language of the claims.” (Doc. No. 432, at 5.) Alternatively, Defendants argue these are means-plus-function terms because “the claim language fails to connect the performance of the functional limitations to the structure set forth in the claim.” *Id.* at 7. As to Claim 43 of the ’107 Patent, for example, Defendants argue that “[t]he claim does not

indicate how the path is configured to ‘distinguish’ one piece of Ethernet terminal equipment from another.” *Id.* Plaintiffs reply that “the terms ‘end device,’ ‘central piece of equipment,[’] and ‘terminal equipment’ are all known structures in the art,” and the claimed subject matter is an inventive configuration not subject to 35 U.S.C. § 112(6). (Doc. No. 440, at 2.) Plaintiffs further urge the disputed terms “are limitations that the claimed structures must be capable of performing.” *Id.* at 4–5.

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112, ¶ 6; *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015) (en banc in relevant portion). Section 112, Paragraph 6, provides that a structure may be claimed as a “means . . . for performing a specified function” and that an act may be claimed as a “step for performing a specified function.” *Masco Corp. v. United States*, 303 F.3d 1316, 1326 (Fed. Cir. 2002).

But § 112, ¶ 6 does not apply to all functional claim language. There is a rebuttable presumption that § 112, ¶ 6 applies when the claim language includes “means” or “step for” terms, and that it does not apply in the absence of those terms. *Masco Corp.*, 303 F.3d at 1326; *Williamson*, 792 F.3d at 1348. The presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function. *See Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015) (§ 112, ¶ 6 does not apply when “the claim language, read in light of the specification, recites sufficiently definite structure” (quotation marks omitted) (citing *Williamson*, 792 F.3d at 1349; *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014))); *Williamson*, 792 F.3d at 1349 (§ 112, ¶ 6 does not apply when “the words of the claim are understood by persons of ordinary skill in the art to have sufficiently definite meaning as the name for

structure”); *Masco Corp.*, 303 F.3d at 1326 (§ 112, ¶ 6 does not apply when the claim includes an “act” corresponding to “how the function is performed”); *Personalized Media Commc’ns, L.L.C. v. Int’l Trade Comm’n*, 161 F.3d 696, 704 (Fed. Cir. 1998) (§ 112, ¶ 6 does not apply when the claim includes “sufficient structure, material, or acts within the claim itself to perform entirely the recited function . . . even if the claim uses the term ‘means.’” (quotation marks and citation omitted)).

Here, Defendants generally identify “to” phrases that appear in Claims 1, 43, 104, and 111 of the ’107 Patent, Claims 1, 69, 73, and 142 of the ’760 Patent, and Claims 1, 7, 26, 40, and 96 of the ’838 Patent. (Doc. No. 432, at 3 n.4). Specifically, with respect to the ’107 Patent, Defendants argue that “[t]he claim does not indicate how the path is configured to ‘distinguish’ one piece of Ethernet terminal equipment from another.” *Id.* at 7. Claim 43 recites only: “The piece of Ethernet terminal equipment of claim 1 wherein the information *to distinguish the piece of Ethernet terminal equipment from at least one other piece of Ethernet terminal equipment.*” ’107 Patent at 19:20–23 (emphasis added). Thus, Defendants’ position, if accepted, would essentially eliminate the entirety of Claim 43, and is therefore disfavored because “claims are interpreted with an eye toward giving effect to all terms in the claim.” *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006). Defendants submit that statements of intended use or purpose are not limitations, but here, as discussed previously in *Chrimar II*, the terms at issue set forth required configuration rather than merely purpose or use. *See Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1381–82 (Fed. Cir. 2011) (“We discern no error in the district court’s view that this term requires that the device is *programmed or configured* to perform the stated function.”) (emphasis added).

Similarly, as discussed in *Chrimar II*, the “to . . .” terms are not “in a format consistent with traditional means-plus-function claim limitations.” *Williamson*, 792 F.3d at 1350.

Previously, the Court stated:

What is claimed in the ’107 Patent is not an inventive “end device,” but a known “end device” configured in an inventive way. *See* ’107 Patent at 22:17–29 (Claim 104). Similarly, with respect to the ’838 and ’760 Patents, Defendants identify “central piece of equipment” and “terminal equipment” as nonce words to carry out the functions of “to detect...” and “to control...”, and “to distinguish...” Yet again, Defendants do not dispute that these claim terms were known structures in the art, and indeed previously proposed a construction for “terminal equipment” they contended would be understood by a person of ordinary skill in the art when reading the claims.

(*Chrimar II*, Doc. No. 123, at 10.)

Here again, the parties do not dispute these claim elements were well known in the art. Where a claim term has an understood meaning in the art, it recites sufficient structure. *Williamson*, 792 F.3d at 1349; *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002). As the Court previously explained, in this regard the instant cases are distinguishable from *Williamson* because in *Williamson* the presumption against means-plus-function claiming was overcome where the patent claimed a structural-sounding word (“distributed learning control module”) that had no settled meaning in the art. *Williamson*, 792 F.3d at 1351. Here, the claimed “end device” or “terminal equipment” indisputably had known meaning in the art and in the context of the patents-in-suit. *See* ’107 Patent Abstract, ’838 Patent Abstract, ’760 Patent Abstract. Defendants do not challenge the known meaning of the terms, but argue that the known structures must be sufficient to perform the recited functions. (Doc. No. 432, at 8.) However, Defendants do not even contend that these structures are incapable of performing the recited functions. Defendants instead argue that these structures are generic, that the claimed configuration of these structures is not novel, and that Plaintiffs’ expert does not explain how the

claim recites a configuration of these known structures to perform the recited functions. (Doc. No. 432, at 9.) These arguments that configurations are not novel, or that such configurations are not adequately disclosed, may relate to issues of invalidity, but do not bear on claim construction when the claims themselves recite sufficient structure that was well known in the art and that is capable of performing the claimed functions.² Finally, the Court also previously emphasized that *Williamson* did not do away with the rebuttable presumption that terms without means are not subject to § 112, ¶ 6, but merely found that presumption should not be characterized as “strong.” *Id.* at 1349.

Defendants have failed to overcome the presumption against means-plus-function claiming because they have failed to show that the terms in question do not recite sufficient structure. Therefore, the Court finds these terms are not governed by 35 U.S.C. § 112, ¶ 6. Moreover, for the reasons discussed herein, the Court finds the term “to...” needs no further construction.

V. “detection protocol” (’012 Patent, Claim 35; ’107 Patent, Claim 72; ’760 Patent, Claim 59)

| Plaintiffs’ Proposal | Defendants’ Proposal |
|--|----------------------|
| “plain-and-ordinary meaning; the term is not Indefinite” | Indefinite |

This Court previously considered indefiniteness challenges to the term “detection protocol” in *Chrimar II*. (6:15-cv-163, Doc. No. 122, at 8–10.) Defendants raise the same indefiniteness arguments that were previously raised and raise only one new argument that the specification is ambiguous as to who or what is doing the detecting. (Doc. No. 432, at 21.) However, Defendants have not identified any limitation as to who or what does the “detecting.” Therefore, the Court finds this argument unpersuasive. For the reasons explained in *Chrimar II*

² The Court takes no position at this time as to issues of enablement or written description.

(6:15-cv-163, Doc. No. 122, at 8–10), the Court finds the term “detection protocol” to be definite and finds that no further construction is necessary.

VI. “distinguishing information about the piece of Ethernet equipment” (’012 Patent, Claim 31)

| Plaintiffs’ Proposal | Defendants’ Proposal |
|--|---|
| “information to distinguish the piece of Ethernet data terminal equipment from at least one other piece of Ethernet data terminal equipment” | “information to differentiate each piece of Ethernet data terminal equipment from each other piece of Ethernet data terminal equipment” |

In *Chrimar I*, this Court previously construed this disputed term to mean “information to distinguish the piece of Ethernet data terminal equipment from at least one other piece of Ethernet data terminal equipment.” (6:13-cv-880, Doc. No. 92, at 15.) The parties raised no new arguments in the briefing or at the hearing regarding the meaning of this term. Accordingly, for the reasons previously explained, the Court construes the term “distinguishing information about the piece of Ethernet equipment” to mean “information to distinguish the piece of Ethernet data terminal equipment from at least one other piece of Ethernet data terminal equipment.”

VII. “current” / “current flow” (’107 Patent, Claims 1, 72, 104; ’760 Patent, Claims 1, 59, 73; ’838 Patent, Claims 1, 7, 26, 69)

| Plaintiffs’ Proposal | Defendants’ Proposal |
|---|--|
| “‘a flow of electric charge’; ‘current flow’ does not require actual flow of electric charge” | “‘current’ means ‘a flow of electric charge’ ‘current flow’ means ‘the actual flow of electric charge’” |

In *Chrimar II*, the Court construed these disputed terms to mean “a flow of electric charge,” and “reject[ed] Defendants’ argument that the phrase ‘current flow’ necessarily ‘requires the actual presence of current flowing.’” (6:15-cv-163, Doc. No. 122, at 14–16.) The parties raised no new arguments in the briefing or at the hearing regarding the meaning of these

terms. Accordingly, for the reasons previously explained, the Court construes the terms “current” and “current flow” to mean “a flow of electric charge.”

VIII. “BaseT” (’012 Patent, Claims 36, 56, 60; ’107 Patent, Claim 5; ’760 Patent, Claims 1, 31, 59, 69, 72, 73, 106, 142, 145; ’838 Patent, Claim 1)

| Plaintiffs’ Proposal | Defendants’ Proposal |
|--|---|
| “twisted pair Ethernet in accordance with the 10Base-T or 100Base-T standards” | “10BASE-T, which requires communication over twisted pair cabling at 10 Mb/s” |

In *Chrimar II*, the Court construed this disputed term to mean “twisted pair Ethernet in accordance with the 10BASE-T or 100BASE-T standards.” (6:15-cv-163, Doc. No. 123, at 16–18.) The parties raised no new arguments in the briefing or at the hearing regarding the meaning of this term. Accordingly, for the reasons previously explained, the Court construes the term “BaseT” to mean “twisted pair Ethernet in accordance with the 10BASE-T or 100BASE-T standards.”

IX. “path coupled across” (’012 Patent, Claim 31; ’107 Patent, Claims 1, 104)

| Plaintiffs’ Proposal | Defendants’ Proposal |
|-----------------------------------|--|
| “path permitting energy transfer” | “path permitting energy transfer between [the claimed contacts]” |

In *Chrimar II*, the Court construed this disputed term to mean “path permitting energy transfer.” (6:15-cv-163, Doc. No. 123, at 20–22.) The parties raised no new arguments in the briefing or at the hearing regarding the meaning of this term. Accordingly, for the reasons previously explained, the Court construes the term “path coupled across” to mean “path permitting energy transfer.”

X. “powered off” / “powered-off Ethernet terminal equipment” / “powered-off end device” (’107 Patent, Claims 103, 104, 111, 125; ’760 Patent, Claims 72, 145)

| Plaintiffs’ Proposal | Defendants’ Proposal |
|-----------------------------|---|
| “without operating power” | “no power is applied to the claimed equipment/device” |

In *Chrimar II*, the Court construed this disputed term to mean “without operating power.” (6:15-cv-163, Doc. No. 123, at 18–20.) The parties raised no new arguments in the briefing or at the hearing regarding the meaning of this term. Accordingly, for the reasons previously explained, the Court construes the term “powered off” to mean “without operating power.”

Finally, the parties submitted the following agreed constructions:

| Claim Language | Plaintiffs’ Proposed Construction | Defendants’ Proposed Construction | Court’s Construction |
|---|---|---|---|
| “loop formed over” (’760 Pat., Cls. 1, 73) | “round trip path formed over” | “round trip path formed over” | “round trip path formed over” |
| “An adapted piece of Ethernet data terminal equipment” (’012 Pat., Cl. 31 (preamble)) | The preamble is limiting. The phrase needs no further construction and should be afforded its plain and ordinary meaning. | The preamble is limiting. The phrase needs no further construction and should be afforded its plain and ordinary meaning. | The preamble is limiting. The phrase needs no further construction and should be afforded its plain and ordinary meaning. |
| “used for normal network communication,” “used to carry Ethernet communication signals,” and “used to carry BaseT communication signals” | Plain meaning | Plain meaning | Plain meaning |

| Claim Language | Plaintiffs' Proposed Construction | Defendants' Proposed Construction | Court's Construction |
|--|-----------------------------------|-----------------------------------|----------------------|
| ('012 Pat., Cls. 56, 59; '107 Pat., Cl. 1; '760 Pat., Cls. 1, 73; '838 Pat., Cl. 1) | | | |
| “[wherein distinguishing information about the piece of Ethernet data terminal equipment] is associated to impedance within the at least one path” ('012 Pat., Cl. 31) | Plain meaning | Plain meaning | Plain meaning |

The Court, having reviewed the parties' agreed constructions, as well as the claims, specification, and prosecution history of the patents-in-suit, finds the parties' agreed constructions appropriate and construes the terms as set forth above.

CONCLUSION

For the foregoing reasons, the Court adopts the constructions set forth above.

So ORDERED and SIGNED this 17th day of June, 2016.


JOHN D. LOVE
UNITED STATES MAGISTRATE JUDGE